

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Chalmette Cane Sugar Refinery
American Sugar Refining Inc.
Initial Title V Permit
Arabi, St. Bernard Parish, Louisiana
Agency Interest Number: 1329
Activity Number: PER19960001
Draft Permit 2500-00009-V0**

I. APPLICANT:

Company:

American Sugar Refining Inc..
Chalmette Cane Sugar Refinery
7417 N Peters St., Arabi, LA 70032
Approximate UTM coordinates are 789.226 kilometers East and 3316.252
kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

The Chalmette Cane Sugar Refinery currently produces refined granulated sugar, confectionery sugar, blackstrap molasses, and several specialty products. Raw cane sugar is received by ship, barge, truck, and rail and is stored in sheds until processed. The raw sugar is refined through the processes of affination, carbonation, press filtration, bone char defecation, crystallization, and centrifugation. The drying operation consists of countercurrent flows of hot air and sugar, creating dust which is recovered by cyclone gravimetric separation and wet scrubbing.

In the production of powdered sugars, granulated sugar is pulverized along with cornstarch (or, in the case of a specialty product, malto-dextrin) in a rotary mill. The product is collected in a modified baghouse which acts not only to collect product but as a control device as well.

Other existing control features include wet scrubbers for the control of particulate in the form of sugar dust. All but one of the scrubbers (from the 1991 modification) shall have an efficiency of at least 99.8%. The fifth scrubber, a beater rotoclone (Emission Point 45-89) shall be at least 98% efficient. Emission Point 46-89 (a rotoclone replaced in 1991) shall be at least 98% efficient. All the wet scrubbers added in 1995, Emission Points 050-95, 051-95, 052-95, 053-95 and 054-95, shall be at least 95% efficient. The gravity collector, Emission Point 056-95, and fabric filter, Emission Point 055-95, shall be at least 95% efficient.

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The emissions from the hydrochloric acid tanks, Emission Points 057-95 and 058-95, shall be controlled with wet limestone injection having an efficiency of at least 90%. Emissions from the phosphoric acid tank and the AQUA ammonia tank, Emission points 059-95 and 060-95, are sent to the aeration basin in the waste water treatment plant. This process has a controlled efficiency of at least 90%. The change in emissions reflected below is due to updated emission factors and the elimination of fuel oil combustion. This refinery was previously permitted to burn fuel oil as well as natural gas.

The facility presently operates under State Permit No. 2500-00009-03 which was granted June 9, 1995 and Small Source Permit No. 2738 issued August 3, 2001. This is the initial Part 70 operating permit for the facility.

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire were submitted by American Sugar Refining Inc. on October 15, 1996 requesting a Part 70 operating permit. Additional information dated March 6, 1997, July 14, 1999, August 3, 1999, and August 8, 2005 were also received.

Project description

American Sugar Refining Inc., Chalmette Cane Sugar Refinery is not proposing any process or operational changes to the facility. This is the initial Part 70 operating permit for this facility.

Permitted Air Emissions

The permitted emission rates are a reflection of the current operating conditions at the Chalmette Cane Sugar Refinery. The sources of emissions are boilers, kilns and various dust collecting equipment. The permitted emission rates are in tons per year as follows:

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| <u>Pollutant</u> | <u>Before</u> | <u>After</u> | <u>Change</u> |
|-------------------|---------------|--------------|---------------|
| PM ₁₀ | 236.36 | 242.19 | +5.83 |
| SO ₂ | 960.1 | 1.19 | -958.91 |
| NO _x | 480.4 | 227.6 | -252.80 |
| CO | 43.7 | 99.33 | +55.63 |
| VOC | 2.8 | 12.01 | +9.21 |
| Ammonia | not reported | 0.04 | +0.04 |
| Hydrochloric Acid | not reported | 0.006 | +0.006 |

Regulatory Analysis

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, Louisiana Comprehensive TAP Emission Control Program, NSPS, NESHAP, CAM and PSD regulations.

Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or Table 1 of the draft permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit.

Prevention of Significant Deterioration Applicability

The current facility does not have the potential to meet the definition of a Major Stationary Source with respect to the Prevention of Significant Deterioration (PSD) regulations.

MACT requirements

This facility is a minor source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51, therefore Maximum Achievable Control Technology and the NESHAP regulations do not apply.

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Air Modeling Analysis

A screen was performed by LDEQ. It was determined that the impact on air quality from the emissions of the facility will be below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond industrial property.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

IV. PERMIT SHIELDS

A permit shield was requested but is being denied as the request did not explicitly state the federally applicable requirements.

V. PERIODIC MONITORING

Federal regulation 40 CFR 64 Compliance Assurance Monitoring is not applicable to this facility. The facility is not a major source for any regulated air pollutant thereby exempting them from any monitoring.

| VI. STREAMLINED REQUIREMENTS | | | |
|-------------------------------|----------------------------|----------------------|--------------------------------|
| Unit or Plant Site | Programs Being Streamlined | Stream Applicability | Overall Most Stringent Program |
| Chalmette Cane Sugar Refinery | None | | |

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Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

CAM - Compliance Assurance Monitoring rule – A federal air regulation under 40 CFR Part 64

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Hydrogen Sulfide (H₂S) - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

NESHAP - National Emission Standards for Hazardous Air Pollutants – Toxic air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air

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Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

NSPS - New Source Performance Standards – Air emission standards for specific types of facilities, as outlined in 40 CFR Part 60

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulphur.

TAP - Toxic Air Pollutant (LDEQ acronym for air pollutants regulated under LAC 33 Part III, Chapter 51, Tables 1 through 3

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.